

REMARKS

Claims 1-8 and 10-20 are pending. By this Amendment, claim 10 is amended.

The Office Action objects to claim 10 and indicates that the term "variable" should be replaced with --variables--. Applicants have amended claim 10 to pluralize the term "variable." Accordingly, the objection should be withdrawn.

The Office Action rejects claims 1-8, 10-18 and 20 under 35 USC §102(e) over U. S. Patent 6,202,064 to Liddy. This rejection is respectfully traversed.

Initially, Applicants thank Examiner Harper for clarifying, in a telephone interview conducted on June 19, 2003, that the rejection is actually based on U.S. Patent 6,006,221 to Liddy et al., which was cited on the Form PTO-892 attached to the Office Action, and a copy of which was provided to Applicants.

Accordingly, these remarks are directed to U.S. Patent 6,006,221 to Liddy et al. (hereinafter referred to as "Liddy").

A prior art reference anticipates the subject matter of a claim when that reference discloses every feature of the claimed invention, either explicitly or inherently. In re Schreiber, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997) and Hazani v. Int'l Trade Comm'n, 126 F.3d 1473, 1477, 44 USPQ2d 1358, 1361 (Fed Cir. 1997). While, of course, it is possible that it is inherent in the operation of the prior art device that a particular element operates as theorized by the Examiner, inherence may not be established by probabilities or possibilities. In re Oelrich, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981) and In re Rijckaert, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993).

Liddy generates a language-independent conceptual representation of the subject content of a document and can subject the document to additional analysis to provide term-based representations, such as extraction of information-rich terms and phrases, such as proper nouns - see the Summary of the Invention in col. 2 of Liddy.

The Office Action asserts that the feature of "skeletising each of the first representations to generate a corresponding second representation for each of the input strings; said skeletising step replacing the linguistic information with abstract variables in each of the second representations" is disclosed in col. 6, lines 15-20, Figs. 1 and 2, col. 6, line 63 through col. 7, line 5. In particular, the Office Action asserts that this feature is anticipated by "generating both conceptual and term-based alternative representations of the documents and queries with relevant information extracted from the documents and indexed." Applicants respectfully disagree.

While Liddy linguistically analyzes input strings to generate first representations (of those strings) which include linguistic information, Liddy does not perform skeletising each of the first representations to generate a corresponding second representation for each of the input strings, the skeletising step replacing the linguistic information with abstract variables in each of the second representations, as recited in claim 1. In Liddy, the "analogous processing" mentioned in col. 6, lines 15-20 is said to be "to determine the requirements for document matching." The alternative representations of the documents and queries are said to be both conceptual and term based - see lines 19 and 20 of col. 6 of Liddy.

However, Liddy never performs further processing that obtains second representations obtained by replacing the linguistic information obtained by the initial processing with abstract variables. Nor does Liddy provide a system to do so.

Fig. 2 of Liddy shows a preferred method of operation. For example, part of speech tagger 130 is disclosed as outputting a parts of speech tagged document and a proper noun identifier 140 and categorizer that identifies and tags proper nouns. Modules 150-190 generate monolingual vector codes of the subject contents of both documents and queries. Module 150 tags each word with the codes of all multilingual concept groups to which various senses of the word/phrase in the document belongs. Module 160 outputs a fully tagged text stream with a single multilingual concept group for each word in the input text.

Module 170 outputs a tagged, native language text stream with unique, monolingual (English), hierarchical categories assigned to each substantive word. Module 180 outputs a text stream with disambiguated monolingual categories assigned to each substantive word. Module 190 produces a fixed-dimension vector representation of the concept-level context of the text.

None of this processing in Liddy replaces earlier performed linguistic analysis. Liddy just performs additional processing of a query or of a document, but does not replace the earlier processing results. Not only does Liddy fail to disclose replacing linguistic information with other information, but also fails to disclose replacing linguistic information with abstract variables.

Therefore, Liddy does not anticipate claim 1.

Accordingly, the rejection of claims 1-8, 10-18 and 20 under 35 USC §102(e) over Liddy is improper and should be withdrawn.

The Office Action rejects claim 19 under 35 USC §103(a) over Liddy in view of Collins. This rejection is respectfully traversed.

Liddy does not anticipate claim 1 for the reasons stated above. Collins does not and was not applied to provide the features missing from Liddy as noted above. Accordingly, the rejection is improper because the asserted combination of references does not disclose, teach or suggest every feature recited in claim 1.

Furthermore, Collins is cited to render obvious "performing machine learning for selecting particular operating functions out of said plurality of operating functions and for determining the processing order." Collins is said to teach the machine language technique of discriminative re-ranking for natural language parsing where re-ranking techniques can be applied to problems in natural language processing to improve the resulting representations.

The alleged motivation to combine these references is "for the purpose of improving the resulting representation."

Applicants respectfully submit that the Office Action has not made out a prima facie case of obviousness for the reasons stated above concerning the shortcomings of Liddy, and because the Office Action fails to provide proper motivation to combine these references as alleged.

A showing of a suggestion, teaching, or motivation to combine the prior art references is an "essential evidentiary component of an obviousness holding." C.R. Bard, Inc. v. M3 Sys. Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998). This evidence may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved. See Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc., 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996). However, the suggestion more often comes from the teachings of the pertinent references. See In re Rouffet, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998). This showing must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not "evidence." See In re Dembiczak, 175 F.3d 994 at 1000, 50 USPQ2d 1614 at 1617. However, the suggestion to combine need not be express and "may come from the prior art, as filtered through the knowledge of one skilled in the art." Motorola, Inc. v. Interdigital Tech. Corp., 121 F.3d 1461, 1472, 43 USPQ2d 1481, 1489 (Fed. Cir. 1997).

The assertion that one of ordinary skill in the art would have been properly motivated to combine these two references (i.e., filed it desirable) "for the purpose of improving the resulting representation" is not a clear and particular evidentiary teaching, but is only a broad conclusory statement.

Moreover, the teaching of re-ranking of parsing results in Collins is not the same as selecting particular operating functions out of a plurality of operating functions, many of which may not be considered parsing functions.

Finally, even if these two references were somehow properly combined, they would not render obvious the method of claim 1 because the processing order of Liddy would not necessarily be changed by re-ranking of any parsing functions. Certain functions might be repeated, but their order not changed.

Accordingly, Applicants respectfully submit that claim 1 is neither anticipated by Liddy nor rendered obvious by Liddy in combination with Collins, and that the outstanding rejections should be withdrawn.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-8 and 10-20 are earnestly solicited.

Should the Examiner believe that anything further is needed to place the application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,



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